

REMARKS

Claims 1-13 are all the claims pending in the application. Claims 8-13 have been withdrawn as being directed to a non-elected invention. Reconsideration and allowance of all the claims are respectfully requested in view of the following remarks.

Claim Rejections - 35 U.S.C. § 103

- In an Office Action mailed on July 8, 2002, the Examiner rejected claims 1-7 under §103(a) as being unpatentable over Japanese 3-226251 to Kusase (hereinafter Kusase) in view of various ones of the following references: US Patent 4,102,040 to Rich (hereinafter Rich); Japanese Patent 1-252141 to Shinichiro (hereinafter Shinichiro); and US Patent 4,692,646 to Gotou (hereinafter Gotou). Applicants respectfully traverse the Examiner's rejections because the references fail to establish *prima facie* obviousness in that they do not teach or suggest every element as set forth in Applicants' claims.

Claim 1 sets forth an alternator comprising a rotor, a stator comprising a stator core surrounding the rotor, and a polyphase stator winding installed in the stator core, the stator core being formed with a number of slots, the polyphase stator winding comprising a number of winding portions, wherein each winding portion comprises a long strand of wire wound so as to alternately occupy an inner layer and an outer layer in a slot depth direction within said slots at intervals of a predetermined number of slots, the strands of wire folding back outside the slots at both axial end surfaces of the stator core.

The Examiner asserts that Kusase teaches certain elements in Applicants' claim 1 except for an abutting portion on the core used to form an annular shape by joining core ends at the abutting portion.¹ In contrast to that asserted by the Examiner and to that set forth in claim 1, however, Kusase fails to teach or suggest a number of winding portions, wherein each winding portion comprises a long strand of wire are wound so as to alternately occupy an inner layer and an outer layer in a slot depth direction within said slots at intervals of a predetermined number of slots to form one phase of a stator winding.

¹ Office Action at page 2, item 2, 1st and 2nd paragraphs.

Instead, Kusase discloses only one phase (y phase) that alternately occupies an inner layer and an outer layer in a slot depth direction, whereas the x phase is always on the inner layer, and the z phase is always on the outer layer (see Fig. 1(a), Fig. 4, Fig. 9). Therefore, Kusase fails to teach or suggest a number of winding portions, wherein each winding portion comprises a long strand of wire are wound so as to alternately occupy an inner layer and an outer layer in a slot depth direction within said slots at intervals of a predetermined number of slots to form one phase of a stator winding, as set forth in claim 1.

None of the other references cited by the Examiner teaches or suggests a number of winding portions, wherein each winding portion comprises a long strand of wire are wound so as to alternately occupy an inner layer and an outer layer in a slot depth direction within said slots at intervals of a predetermined number of slots to form one phase of a stator winding, as set forth in claim 1. Therefore, even assuming, *arguendo*, that one of ordinary skill in the art were motivated to combine Kusase with any of the other references as suggested by the Examiner, any such combinations would still not render obvious Applicants' claim 1. Likewise, Kusase in view of Rich does not render obvious dependent claims 2-7.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Amendment Under 37 C.F.R. § 1.111
US Appln. 09/698,206

Atty. Docket: Q61449

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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PATENT TRADEMARK OFFICE

Date: January 7, 2003



Amendment Under 37 C.F.R. § 1.111
US Appln. 09/698,206

Atty. Docket: Q61449

APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims have been amended as follows:

1. (Twice Amended) An alternator comprising:

a rotor for forming north-seeking (N) and south-seeking (S) poles alternately about a rotational circumference; and

a stator comprising: a stator core surrounding said rotor; and a polyphase stator winding installed in said stator core, said stator core being formed with a number of slots extending axially at a predetermined pitch in a circumferential direction,

said polyphase stator winding comprising a number of winding portions, wherein each winding portion comprises a [in which] long [strands] strand of wire [are] wound so as to alternately occupy an inner layer and an outer layer in a slot depth direction within said slots at intervals of a predetermined number of slots, said strands of wire folding back outside said slots at both axial end surfaces of said stator core, and

said stator core being provided with an abutting portion extending axially such that said stator core becomes an annular shape by joining ends of said stator core at said abutting portion.

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